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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,277	10/14/2003	Scott C. Moose	85435THC	7227

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EXAMINER	
BAREFORD, KATHERINE A	
ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 09/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,277	MOOSE, SCOTT C.	
	Examiner	Art Unit	
	Katherine A. Bareford	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9,10 and 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Claims 2, 3, 7, 8, and 11 are canceled

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment of July 18, 2006 has been received and entered.

With the entry of the amendment, claims 2, 3, 7, 8 and 11 have been canceled, and claims 1, 4-6, 9-10 and 12 are pending for examination.

Claim Rejections - 35 USC § 112

2. The rejection of claims 1, 4-6, 9-10 and 12 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement is withdrawn due to applicant's amendments of July 18, 2006 to remove the material identified as new matter in the April 18, 2006 Office Action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quiel et al (US 2002/0164431) in view of Democh (US 4051278).

Quiel teaches a method and apparatus for coating a liquid composition from an applicator to a surface of a moving web. Figure 1B and paragraph [0034]. The web is conveyed along a path through a coating apparatus. Figure 1B and paragraph [0034]. The coating apparatus includes a coating station for applying a coating to the surface of the web. Figure 1B and paragraph [0034]. The coating station includes a backing roller for supporting the web and a slide bead coating hopper for depositing a liquid coating on the web. Figure 1B and paragraph [0034]. The web is wrapped in a partial wrap around the backing roller. Figure 1B and paragraph [0034]. The backing roller is provided with a relieved surface. Paragraph [0040] and figures 4A and 4B. The relieved surface has a pattern of circumferential grooves that provides venting of entrained air. Paragraphs [0040] and [0005] and figure 4A. The pattern of the grooves is such that there can be greater than 2 grooves per mm and the grooves can have a depth of 20 to 80 microns. Figure 4A and paragraph [0040]. This inherently provides a geometry and depth such that any temperature gradient in the web caused by the grooves in the backing roller does not disturb the coating applied by the coating apparatus. (This is shown because (1) the applied coating lacks non-uniformity (paragraph [0057]) and (2) the greater than 2 grooves per mm (claim 3 of this case) and a range that includes 63 microns (0.0025 in) in depth (page 4 of specification of this case), is the pattern taught by applicant to prevent disturbance). A source of liquid coating composition is provided for coating the web. Figure 1B and paragraph [0034]. The web is transported past the coating station, where the liquid composition is applied to the

surface of the web from the coating hopper, whereby the coating of the liquid composition is not disturbed by temperature gradients in the web. Figure 1B and paragraphs [0034], [0040] and [0057]. The coating can be bead coating done from a bead coating apparatus. Figure 1B and paragraph [0034].

Claim 10: the width of the relived surface on the backing roller is equal to or greater than the width of the liquid coating to be applied to the web. Paragraph [0040].

Quiel teaches all the features of these claims except (1) that the difference between the temperature of the backing roller and the liquid coating composition is minimized and (2) the depth of the grooves of 90 micons (claim 9). Quiel does teach that it is desirable to have at least 2 grooves per mm on the backing roller and to have groove depth significantly shallower than that of prior art grooves (about 75 to 150 microns). See paragraph [0014]. Quiel also teaches the use of a groove depth of about 20 to 80 microns. See paragraph [0040]. Furthermore, Quiel indicates that as groove amount is increased from 1 groove per mmm and depth is decreased from 130 microns the coating becomes more and more uniform. See paragraphs [0058] and [0059] (Table 2).

However, Democh teaches a method and apparatus for coating a liquid composition from an applicator to a surface of a moving web. Figure 2 and column 5, lines 40-65. The web is conveyed along a path through the coating apparatus. Figure 2 and column 5, lines 40-65. The coating apparatus can include a bead coating hopper that delivers a liquid coating composition to the web. Column 3, lines 50-60. The coating

apparatus can also include a backing roller for supporting the web at the time of coating application. Figure 2 and column 5, lines 40-65 (coating roll 16). Democh teaches that that temperature of the backing roller can be controlled. Column 4, lines 35-50. The temperature of the coating composition can also be controlled. Column 4, lines 35-45. Democh teaches to control the these temperatures so that the temperature of the coating composition at the point of application and the temperature of the web (support) at the time of coating application is substantially equivalent. Column 1, line 55 through column 2, line 10. This control helps prevent the formation of mottle in the coated layer. Column 1, line 55 through column 2, line 10. The coating compostion can be a water or organic liquid composition, including one with the organic solvent methyl ethyl ketone and various polymers. Column 2, line 45 through column 3, line 5.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Quiel to provide that the temperature difference between the coating liquid at the time of application and the ~~coating~~ backing roller is minimized as suggested by Democh to have improved mottle protection because Quiel teaches a bead coating process with a desire for a uniform coating and Democh teaches that when bead coating it is desired to provide that the temperature of the coating composition at the point of application and the temperature of the web at the time of coating application is substantially equivalent (which would minimize the temperature difference between the two) and that the backing roller can be temperature controlled to maintain this desired temperature, which would indicate that the backing roller would

also be at the coating composition/web temperature. It would further have been obvious to modify Quiel in view of Democh to perform routine experimentation to optimize the depth and amount of the grooves for the specific coating desired, because Quiel indicates that as groove amount is increased (desirably 2 grooves per mm+) and depth is decreased from the conventional depth the coating becomes more and more uniform, and one of ordinary skill in the art would desire to provide the optimum roller for the amount of uniformity needed.

5. Claims 1, 4, 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quiel in view of Democh as applied to claims 6, 9 and 10 above, and further in view of Yapel et al (US 5837324).

Quiel in view of Democh teach all the features of these claims except the polyvinyl butyral in methyl ethyl ketone with a dye coating composition. Democh does teach that the coating composition can be organic, with a methyl ethyl ketone solvent and containing polymeric resins. Column 2, line 45 through column 3, line 5.

Yapel teaches that for slide coating, preferred coatings can include organic solvent based solutions, with a solid component including a polymeric binder such a polyvinyl butyral and a solvent such as methyl ethyl ketone. Column 4, lines 15-40 and column 3, lines 25-40. Yapel also teaches that the coating fluid can also contain a solid component that includes dyes. Column 4, lines 5-10.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Quiel in view of Democh to use a coating material that is made up of polyvinyl butyral in methyl ethyl ketone with a dye as suggested by Yapel when performing a desirable slide bead coating process because Quiel in view of Democh teach performing a slide bead coating process where an organic solvent including methyl ethyl ketone can be used, and Yapel teaches that when performing slide coating, desirable coating liquid can have polyvinyl butyral in methyl ethyl ketone and also contain dyes.

6. The rejection of claims 6, 9 and 10 under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US 5552188) in view of Quiel et al (US 2002/0164431), Jones (US 3877124) and Link et al (US 5431321) is withdrawn due to applicant's amendments of July 18, 2006.

7. The rejection of claims 1, 4, 5 and 12 under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Quiel, Jones and Link as applied to claims 6, 9 and 10 above, and further in view of Yapel et al (US 5837324) is withdrawn due to applicant's amendments of July 18, 2006.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 4-6, 9-10 and 12 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner has provided the new reference to Democh as to the minimizing of the temperature difference between the backing roll and the liquid coating composition for the benefit of reducing mottle.

As to the use of a dye with the liquid coating composition of Yapel, the Examiner notes that as discussed in the rejection above, Yapel teaches that it is well known to include dyes in the coating fluid for slide bead coating. see column 4, lines 5-10.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date

of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KATHERINE BAREFORD
PRIMARY EXAMINER